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ABSTRACT

This issue brief discusses the process of identifying a broadly defined set of desired outcomes for children and youth. It looks at the experiences of four states making progress in this area--Oregon, Texas, Kentucky, and Kansas--in order to illustrate the implications for state education agency policy and practice. It presents principles for ensuring that outcome-based education efforts are compatible with and supportive of more comprehensive attempts to achieve cross-sector accountability for the well-being and success of children and families. It challenges state education agencies (SEAs) to measure success by how well schools contribute to helping children and youth develop a wide range of skills, competencies, and personal attributes. The role of SEA is described in relation to the following: identifying a set of cross-cutting outcomes; forging a common vision; agreeing on outcomes; and identifying indicators. The following accountability efforts are described: (1) setting goals for concerted statewide action in Oregon; (2) restructuring human services in Texas; (3) taking a broad view of education reform in Kentucky; and (4) moving toward performance-based accreditation in Kansas. Two figures are included. The appendix, comprising two-thirds of the document, contains descriptions of 36 child well-being indicators. Each 1-page descriptor contains: the indicator briefly stated; significance; data requirements; current source of information; facts; and comments. (LMI)

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ISSUE BRIEF

September 1993, No. 1

Ensuring Student Success Through Collaboration

IDENTIFYING CROSS-CUTTING OUTCOMES FOR USE AS A FOCAL POINT FOR CHANGE

Overview

This Issue Brief discusses the process of identifying a broadly defined set of desired outcomes for children and youth. It looks at the experiences of a few states making progress in this area in order to shed some light on the implications for state education agency policy and practice.

The discussion that follows is not intended to provide an exhaustive overview of what is happening across the country--well over half the states report progress in developing outcomes-driven education systems. Instead, we present principles to be considered in ensuring that outcome-based education efforts are compatible with and supportive of more comprehensive attempts to achieve collective, cross-sector accountability for the well-being and success of children and families.

As for the states examined, it would be premature to hold any of them up as a model; the efforts are simply too young at this point. However, their emerging experiences serve as a screen through which to sift a variety of promising strategies for beginning to broaden the lines of accountability for educational success and well-being.

A New Standard of Success

Over the past several years, educators have become increasingly familiar with the principles that argue for adopting a results-based accountability system as a means for focusing efforts to improve the quality of public education. Concerns about low levels of student achievement, questions about the adequacy and efficacy of the resources devoted to education, and efforts to vest those who interact with students on a daily basis with greater responsibility and authority have forced a reevaluation of basic assumptions governing the education system.

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

All too often the operative accountability question within the education system has been "Did you do what they told you to do?" rather than "Did it work?" Yet if we are to accomplish our mission of guaranteeing success for all students, "trying hard" can no longer be an acceptable standard of performance. Education policy and practice must be driven by a focus on results (Hornbeck, 1991).

In the wake of an emerging consensus that strategies for enabling individual students to perform at high levels will necessarily differ, education policymakers are beginning to adopt an outcome orientation in setting organizational goals and allocating resources. Many states have defined desired outcomes for all students and have begun to develop strategies to assess the extent to which those outcomes are being achieved.

Parallel Reforms in Other Sectors

This focus on outcomes is not confined to the education system. As policymakers in other systems reassess their missions and mandates, they too are moving to assure that performance is measured by the achievement of positive outcomes for the children and families they serve. For instance, rather than simply providing sustenance, public welfare agencies seek to help clients move from dependency to economic self-sufficiency. The nation's public health system is organizing to achieve an ambitious set of health promotion and disease prevention objectives developed under the leadership of the U.S. Public Health Service. Many states are restructuring their child welfare systems to strengthen family functioning wherever possible.

However, while these sector-specific initiatives hold promise, seldom do they take into account the interrelated nature of the outcomes they are seeking for children and families. In short, efforts to develop outcome-based accountability systems do not yet match the rhetoric about meeting the needs of the whole child.

Initiatives such as the Annie E. Casey Foundation's KIDS COUNT project, an annual state-by-state profile of the condition of America's children and youth, show that it is possible to "paint a statistical portrait" of how well children and youth in different states are faring in a variety of areas. Despite the increasing availability of data that illustrate the condition of children and families, state agencies seldom use this kind of information to gauge their collective performance.

Taking a Holistic View of Desired Results

This suggests that even as state education agencies work to reorient public education systems in order to improve academic performance, they may be missing an opportunity to ensure that the sum total of the resources available for children and families are supporting the goal of education success for all. By the same token, there is less chance that education policies are supportive of the goals of

other child- and family-serving systems. Too narrow a focus on academic outcomes ignores the relationships between education success and other desirable outcomes such as good health, employability, and strong family formation. Continuing down the path of developing discrete and disconnected outcomes for individual systems and programs will only serve to reinforce the fragmented nature of education and other human services.

The Role of the State Education Agency

In a paper prepared for the 1992 CCSSO Summer Institute, Karen Pittman and Michelle Cahill challenge SEAs to **measure success by how well schools contribute to helping children and youth develop a wide range of skills, competencies, and personal attributes.** In particular they emphasize the responsibility of the SEA to:

- **articulate a vision of the outcomes all children and youth should achieve** and the school's role in realizing the vision;
- **offer incentives and technical assistance to schools** as they change policies and practices to reflect the broadened lines of accountability; and
- **establish clear indicators of student progress** that will assist schools and other segments of the community in tracking the extent to which the outcomes are being achieved (Pittman and Cahill, 1992).

State agencies should provide leadership in developing a statement of positive, cross-cutting outcomes that can be employed at the local level. These outcomes should not be imposed from above; communities must be involved in identifying desirable outcomes. It simply does not make sense for each community to start from scratch in developing outcomes and indicators. Furthermore, creating a statewide consensus on desired results allows states to ensure accountability while granting local flexibility in achieving the agreed upon outcomes. Accordingly, the CCSSO policy statement *Student Success Through Collaboration* calls for state education agencies to provide leadership in setting standards of well-being and achievement for young people against which education and other appropriate agencies and organizations can be held accountable.

Identifying a Set of Cross-cutting Outcomes[1]

Many researchers and policy analysts agree that a single set of broad outcomes for use by a variety of policymakers may be the most powerful tool available for formulating policy that promotes collective responsibility for the overall well-being and success of children. Agreement across sectors on desired outcomes for children is the necessary first step in any attempt to define the individual and combined actions that will assure all children are

thriving and developing the skills and competencies needed to succeed in life. When undertaken as part of a broader effort to improve outcomes for children, actions taken by individual agencies to change organizational structures and wisely allocate limited resources stand to have a greater impact (Gardner, 1992; Pittman and Cahill, 1992; Schorr, 1992; Levy, 1990).

Forging a Common Vision

Ideally the development of a set of outcomes should be predicated on a common vision of what the citizens in a state desire for their children. This vision should be developed by a broadly representative group and should contain principles for defining the outcomes and indicators that will be used to drive changes in children's and family policy.

The experience of a working group convened by the Joining Forces "Setting the Agenda" project helps to illuminate the value of developing a consensus around a common vision for children and families and a set of principles to guide the outcome definition process. Comprised of practitioners, policymakers, researchers, and other experts from a variety of fields, the working group was charged with developing a set of outcomes that "expresses in realistic terms, the essence of a policy that creates an affirmative public responsibility for the well-being and success of the child as a whole, and can be used to assess whether progress is being made toward achievement of that policy" (Levy 1990).

An Example of a Conceptual Framework

True to life, the group had difficulty agreeing on a set of outcomes and accompanying measures because of its diverse composition. However, the group was able to reach consensus on a conceptual framework to guide the selection of a set of outcomes, which included the following elements:

Focus on the child--The group felt that their focus should be on outcomes for people not on outcomes for systems, although the latter could have some value as intermediate measures if they can be shown to be closely correlated with what happens to children and families. After much discussion the group also decided to focus primarily on outcomes for children. Recognizing that the availability of human and material resources--e.g., nurturing families, safe communities, access to high-quality education--influences children's well-being, the group conceded that some of the indicators selected might measure this support as a proxy for the actual condition of children.

A developmental perspective--The group felt that outcomes should be framed using a developmental approach that takes into account milestones of success at various stages of growth and the emergence of those characteristics and competencies needed for success in life.

MEASURING CHILD WELL-BEING								
Dimension of Well-Being	Age							
	All Ages	Birth	3	5	9	14	17	19
Physical Health and Safety								
Social/Emotional								
Cognitive/Intellectual								
Economic/Productivity								

Emphasis on positive development--In order to encourage policies that support the healthy development and growth of children, not just the prevention of problems, the group recommended that outcomes be stated positively. Recognizing that problem-based measures are more familiar and that available data tends to focus on deficits and crises, the group conceded that in the near term, any statement of outcomes would be measured by both positive and negative indicators.

Multi-dimensional view of well-being--The group felt that the outcomes should be stated broadly and indicators chosen should enable different systems to see how they can contribute to good outcomes beyond, as well as within, their primary area of responsibility.

Making the Framework Usable: Agreeing on Outcomes[2]

Using this conceptual framework, the working group developed a matrix that could be used to track the condition of children in four broad dimensions of well-being over time. (See above).

Working from such a matrix, the next logical step is to identify broad outcomes that are desirable in each of these dimensions at different developmental stages. The "Setting the Agenda" project defined an outcome as "a condition, competency, or characteristic of a child or youth that is measurable in some relatively simple and direct fashion, or for which a reasonable proxy measure can be identified."

An approach that might be used to flesh out the matrix would be to succinctly define desired outcomes for an adult in each dimension of well-being. For instance a state's vision of a successful adult might consist of the following:

DESIRED OUTCOMES FOR A SUCCESSFUL ADULT	
Physical Health and Safety	• Is in good health, with no untreated health problems • Is physically fit • Is aware of and acting on information to ensure a healthy future
Social/Emotional	• Participates as a contributing member of a community • Fulfills responsibilities of citizenship • Is or is prepared to be an effective parent • Is aware of and respectful of other cultures
Cognitive/Intellectual	• Is literate, with the knowledge & skills necessary to compete in a global economy & exercise the rights and responsibilities of citizenship
Economic/Productivity	• Is employed at level sufficient to meet at least basic needs of self and dependents

With this end result in mind, outcomes for children and youth at different developmental stages would be defined. The outcomes for children and youth would demonstrate that they are on the way to developing the desired adult competencies and characteristics. Because children differ in their rates of development, these outcomes would be generalizations of what might reasonably be expected for most children at a particular age.

Identifying Indicators[3]

Once broad outcomes have been identified, the next challenge is to find appropriate measures for desired outcomes in each dimension at different developmental stages. As a follow-up to the deliberations of the "Setting the Agenda" working group, Nicholas Zill, Christine Nord, and Janet Levy endeavored to do this by identifying a pool of possible indicators that taken together could be used to assess the condition of children in a state. They sought indicators that could be used by a group of state or local policymakers, such as a governor's cabinet or a group of agency CEOs to gauge the efficacy of their efforts.

In choosing indicators to measure the desired competencies and characteristics, Levy, Nord, and Zill tried to select indicators that have **technical integrity**--that is, indicators that actually measure the area of concern or measure a proxy whose correlation with the area of concern is clearly established. They also looked

for indicators that are **measurable in an unbiased, reliable, and consistent way over time**. The three also sought indicators that are **policy relevant**, i.e., comprehensible to a wide audience and related to a circumstance that is both important and subject to change through reasonable action.

It is important to note how the conceptual framework and developmental matrix influenced the process of selecting indicators. The "Setting the Agenda" project was not satisfied with the idea of letting the outcome definition process be driven by what data was currently available. According to Levy (1993), **by starting with a conceptual framework,**

> **issues of data availability appropriately take a backseat to basic decisions about what you want to know about children and families and why you want to know it, and these decisions, in turn, guide smarter choices about which indicators are relevant and how to fix data inadequacies.**

To some extent, the list of indicators assembled by Levy, Zill, and Nord points out current data inadequacies and underscores the need for a more sophisticated technology for measuring outcomes. The list is attached as Appendix I. This list, along with the working group's conceptual framework, could serve as an excellent starting point for state efforts to define cross-cutting outcomes for children and families.

Implications for State Education Agencies

Although a few states have begun to identify and adopt outcomes that can be used by a range of state agencies (see the discussions of Oregon and Texas below), all states will not, in the near term, be able to reach consensus on a set of outcomes that cut across agency boundaries. However, efforts to develop outcomes for education should not be put on the back burner in anticipation of a more comprehensive effort.

State education agencies can act now to ensure that efforts to define outcomes for the education system reflect the principles discussed above. **Emphasizing positive youth development and taking a multidimensional view of what constitutes education success are particularly important in beginning to broaden the lines of responsibility.** In forging agreement on the desired outcomes that will guide the practice and policies of SEAs, state education policymakers can begin laying the groundwork for participation in statewide efforts to achieve collective accountability for the well-being and healthy development of all children and youth.

SEAs are doing this in a number of ways, including:

- taking an expansive view of the skills and competencies that schools can help students develop;

- involving experts from other agencies and organizations that serve children and families in the education outcome-definition process; and

- participating in efforts to define desired outcomes for other systems, and wherever feasible, adopting policies and practices to help achieve those goals.

Setting Goals for Concerted, Statewide Action in Oregon

One of the most carefully watched efforts to develop and employ cross-cutting outcomes is occurring in **Oregon**. In 1989, the state developed a strategic plan to ensure the prosperity and well-being of all its citizens. Following the release of the plan, the Oregon Legislature created a Progress Board to translate the strategy into measurable goals for the state. Over the course of the next two years, with extensive assistance from a broad cross-section of citizens, the Progress Board developed *Oregon Benchmarks*, a report setting goals for reaching desired outcomes pertaining to people, to the quality of life, and to the economy.

The report is revised biennially, both to reflect the status of progress toward the goals and to add new data. Data are still unavailable for some of the benchmarks. However, the Progress Board did not want a lack of data to disqualify important outcomes from being adopted. The state is committed to all the goals in the report and it continues to seek appropriate ways of collecting the needed data.

The *Benchmarks* report has become an important tool for setting program and budget priorities in Oregon. State agencies have begun to use results-oriented performance measures that are linked to the broader list contained in the *Benchmarks* report to inform the policymaking and budgeting processes.

Oregon's education reform legislation is a case in point. The legislation explicitly calls for a restructured education system that will contribute to achieving a number of the goals in the *Benchmarks* report. The legislation specifies outcomes for students--e.g., all students will have the knowledge and skills necessary to succeed in the world of work, as members of families and as citizens of a participatory democracy--as well as outcomes for the education system that are reasonably calculated to ensure the educational success and well-being of all students--e.g. integrating education services with other available community services to provide comprehensive, flexible support that strengthens families and safeguards the welfare of children.

Restructuring Human Services in Texas

In **Texas**, two pieces of legislation passed in 1991 have spurred interagency planning around common goals. House Bill 7 provides for systemic changes in the state's health and human service systems according to a set of principles that specify

The **Oregon** SEA's commitment to meeting the challenges set forth in the *Benchmarks* report is evident in number of priority initiatives, particularly their focus on early childhood education and comprehensive services. As funding becomes available, the SEA plans to invest in a variety of supportive services to ensure physical, emotional, and intellectual readiness. In 1992-93, the Oregon Prekindergarten Program (OPP) provided grants to 27 diverse agencies--including Head Start grantees--to provide comprehensive services to three- and four-year-olds. In order to maximize the impact of both OPP and Head Start, the SEA is collaborating with Head Start programs in a number of areas, including finding ways of providing wrap-around child care and working on transition of preschool children and families into public school.

A departmental Task Force on the Integration of Social Services has made a number of recommendations for promoting school-linked efforts. To begin to implement the recommendations, the SEA is working with the department of human resources and the NorthWest Alliance for Information and Referral Services to develop a model process for cross-agency training. They hope to make the model training available through the state's professional development center in order to help local administrators and frontline staff work across agency boundaries in responding flexibly to the needs of families. Other state agencies are also working on issues that span traditional boundaries. For instance, the state department of human services has developed 12 pilot projects to bring health and human services to the school site, with an eye toward improving progress on a number of benchmarks, including improved academic achievement and health status, reduced teen pregnancy rates, and higher graduation rates.

desirable outcomes for the people of Texas and the systems designed to serve them. Primary to the systemic changes is the reorganization of twelve state health and human service agencies under a single goverance structure, the Texas Health and Human Service Commission which is headed by a commissioner appointed by the governor. Desired outcomes for the state's human service systems include maximizing federal funds through efficient use of state and local resources, increasing access to effective services at the local level, and improving the coordination of children's services.

Although the legislation does not mandate the involvement of the state's education system, the Texas Education Agency (TEA) was integrally involved in developing HB 7 and advocated for the inclusion of educational goals--such as improving education and vocational training to meet specific job goals and reducing school dropouts. Recognizing

Despite the challenges of making the transition to outcome-oriented planning and budgeting, interagency initiatives are proliferating in Texas as a result of state-level discussions about achieving the goals specified in HB 7. For instance, the state education agency, the health department, and the state Medicaid agency are working jointly to improve access to health services through linkages with the public schools. According to TEA staff, HB 7 made it easier for the different agencies to work together by making it clear that promoting the health of Texans is a cross-cutting priority. State staff credit HB 7's focus on maximizing federal funding and improving the coordination and delivery of children's services with putting a stamp of legitimacy on efforts to certify local education agencies as Medicaid providers. In addition, TEA and the state health department are jointly funding health specialists in Texas's intermediate education units, and federal Maternal and Child Health monies are being used to fund school-based health services on a competitive basis.

that the involvement of the education system is crucial to achieving these and many other aims of the bill, TEA seized the opportunity to strengthen ties with other state agencies.

House Bill 2009 reinforces HB 7 by requiring state agencies to conduct strategic planning under the guidance of the Governor's Budget and Planning Office and the Legislative Budget Board. HB 2009 requires each agency to develop a strategic plan for achieving its mission, goals, and objectives. In responding to HB 2009, the Texas Education Agency looked closely at the outcomes articulated for other human services systems in HB 7 in relation to public education's goal of excellence and equity in academic achievement for all students.

The result is a plan for achieving a series of cross-cutting objectives that support the overall mission of improving student achievement. Recognizing that students' access to needed health and human services is essential to eliminating the achievement gap across all student populations, the Agency's strategic plan includes a separate strategy relating to TEA's and school districts' responsibility to "act as a catalyst and develop programs for the provision of family and community supports needed for student success in school."

The plan calls for enhancing both system outputs--such as the number of students receiving school-linked health and human services--and student outcomes--such as the number of children who are properly immunized and the number of apprenticeship program graduates who are employed in the field in which they were trained.

Making the transition to outcome-oriented planning and budgeting processes is not an easy task. As in Oregon, one of the biggest challenges facing TEA and other state agencies is determining how to assess progress toward their goals. Until data

can be collected that accurately reflect the different outcomes being sought, state agencies continue to rely on tracking processes and inputs to a large degree.

Determining how students are faring in achieving a wide array of desired outcomes is also difficult. Currently education data can be disaggregated by race and ethnicity, but the capacity to relate education progress to health status, incidence of out-of-home placement, access to high-quality preschool, and participation in community service activities does not currently exist. Being able to show the correlations between academic performance and other social indicators for groups of students would provide an even stronger rationale for coordinated action and targeting of resources in order to ensure equitable education outcomes.

Taking a Broad View of Education Reform in Kentucky

Kentucky's landmark education reform legislation takes a broad view of desired student outcomes and what would be required to achieve them. Prior to the Kentucky Supreme Court decision declaring Kentucky's system of education invalid, then Governor Wilkinson had created a Council on School Performance Standards to recommend what milestones students should be achieving at various points in their schooling and how progress toward those milestones could be measured. Through focus groups, surveys and interviews, the Council canvassed the citizens of Kentucky to get their opinions about what the goals of schooling should be.

The message was clear: Kentuckians want students to be able to use what they learn in school in all aspects of their lives--at home, at work, in the community, and in their personal lives. Students should be able to make use of skills and knowledge in mathematics, science, language arts and other disciplines in situations they will encounter throughout their lives. They should be able to solve problems, to make informed choices, and to explain and support their decisions. In addition, Kentucky's citizens want students to develop personal attributes such as self-sufficiency and adaptability and to be able to function as a responsible, healthy member of a family, work group, and community.

Working with educators from around the state. the Council translated these aspirations into six broad learning goals. With the passage of the Kentucky Education Reform Act (KERA), the Council was charged with further defining the goals and framing them in terms that can be assessed. Because KERA also called for all students to achieve at high levels and for schools to be held accountable for student progress in reaching the goals, being able to measure student performance was critical.

The Kentucky Department of Education feels that adoption of clear statewide standards and the accompanying expectation that all students will make progress toward and achieve those standards will ensure both equity and

The most apparent example of **Kentucky's** commitment to cross-sector support is its emerging system of Family Resource and Youth Services Centers. Funding for the centers, which are intended to strengthen the capacity of families and other community institutions to respond collectively to the needs of children and youth, flows through the Cabinet of Human Resources, not the state education agency. An interagency task force oversees implementation of the centers, and a state-level monitoring and technical assistance staff is drawn from a variety of state agencies.

As Judy Carter points out, the decision to involve players outside the education system in the process has had a substantial impact on the nature of the centers. The school system did not immediately absorb the additional funding; schools desiring to participate had to work with other human service agencies, parents, and other "outsiders." The implementation plan prepared by the interagency task force called for local planning and control, parent governance of the centers, and a balance between providing support for all parents and students in a school catchment area and targeting special outreach efforts to families who in the past have not been involved with the school (Carter 1992).

excellence in outcomes for children and youth. Clear focus on meeting the agreed upon outcomes serves as a "magnet" around which schools and communities can orient available resources. For the school, the challenge is using time, technology, training materials, homework, grades, recognition, etc. in ways that enable students to make progress toward the standards. For the community as a whole, the standards provide a focus for bringing additional resources to bear on helping ensure that all of Kentucky's students succeed.

Kentucky has adopted performance-based student assessment to measure progress toward the outcomes specified for each of the six goals, in a "high-stakes" accountability system based on each school's two-year progress. Recognizing that schools will need help in producing the results specified, the KERA legislation calls for the state to initiate a long-range effort to support schools in working toward the learning goals.

The assistance provided by the state is predicated on the assumption that schools will need the help of the entire community--parents, health and social service providers, community-based youth development organizations, etc.--in ensuring that all students achieve such challenging outcomes. This state-level commitment to ensure the necessary resources are in place to support the development of Kentucky's students is manifest in policies and programs being developed by the state education agency and other human services agencies as well.

Moving Toward Performance-based Accreditation in Kansas

Efforts in **Kansas** to promote "excellence and equity within the educational system" have led to the development the Quality Performance Accreditation system (QPA). QPA was jointly developed by the Kansas State Board of Education, the state education agency, and representatives of various stakeholder groups. It has since been enacted into law. This effort is an attempt to focus the state's educational resources through collaborative, long-term strategic planning, using defined outcomes and benchmarks to determine if students are acquiring the skills, attitudes, and knowledge levels needed to thrive in a global society.

Kansas educators used an inclusive process to develop the QPA system in order to secure a variety of input and a broad base of support for the initiative. A task force, comprised of legislators, business representatives, parents, community leaders, and local and state education staff worked together to identify:

- Outcomes--statements of agreed-upon results;
- Standards--goal statements indicating the acceptable level of excellence; and
- Indicators--measurements of the status of the standards that are reliable, measurable over time, have policy implications, and are understandable by a broad audience.

The task force agreed upon a fairly broad mix of outcomes and standards. Some of the standards focus on student performance--e.g., all students being able to apply problem-solving skills, and all students acquiring the knowledge, skills, and attitudes essential to live a healthy and productive life. Other standards set goals for school staff, schools, and communities--e.g. action by schools to support children, families, and the community, and joint endeavors by schools and communities to deliver high-quality human resource development for all citizens. Some state indicators have been developed and the SEA hopes that communities will develop local standards and indicators of progress to guide decision making at the local level.

The QPA system was designed to provide policy accountability at the state level and to help schools gauge their progress in meeting the needs of students. Because reliable indicators for measuring progress toward some of the more ambitious standards are not readily available, state staff realize that fully implementing the QPA system for these purposes will take time. Although their efforts are constrained by a lack of resources, the SEA has begun to provide and broker technical assistance to the 200 districts (of 304) and 1,100 schools (of approximately 1,600) that will be in the program in 1993-94. In the initial year of the program, 1991-92, 50 school districts were selected to pilot the initiative.

Kansas's educational leaders realize that achieving the broad goals of the QPA system will require collaboration, not only within the education system, but also among other state and local agencies that serve students and their families. The recent formation of the Corporation for Change, a nonprofit organization whose mission is to implement a coordinated strategy for supporting children and families, holds promise for ensuring the necessary linkages are made. Although both the QPA system and the Corporation are in their infancy, they have significantly similar aims.

Authorized by the legislature in 1992, the Corporation is a joint enterprise of the three branches of Kansas state government, the state board of education, and the business and advocacy communities. One of the Corporation's aims is to develop standards against which progress in improving the lives of children and families can be measured. The standards developed will be used to assess the efficacy of public and private investment in children's and family services. While it is too early to tell how the QPA system will be integrated with the Corporation's efforts, a vehicle for concerted action exists.

The technical assistance effort is largely being shaped by the experiences of those school districts that are working to put outcome-based accountability to the test. SEA staff hope that, as the QPA initiative matures, issues that can be addressed through technical assistance will include:

(1) development of a system of reliable, outcome-based indicators that assesses the results of policy changes at district and school levels; (2) creation of a comprehensive data collection system; (3) development of a longitudinal evaluation plan (with process and impact measurements); and (4) development of financing strategies that are linked to achieving outcomes. The SEA will also encourage QPA districts to work with local service providers and other community-based organizations to help augment efforts to meet the comprehensive needs of their students.

Moving Beyond Agreed-Upon Outcomes to a Results-based *System*

The preceding examples depict promising approaches a handful of states are using to define the outcomes that will provide the foundation for changes in the way children are educated and families are supported.

These examples also hint at some of the attendant challenges posed by using outcomes to reorient the way the education system operates and interacts with other systems. In an article discussing the use of outcomes to provoke changes in the systems that serve children and families, David Hornbeck (1991) notes that desired outcomes are unlikely to occur if they are not explicitly defined and adopted, but that it is naive to assume that they will occur simply because they have been articulated.

In addition to analysis of the underlying assumptions that govern the outcome selection process and consensus about the outcomes that are expected for all children and families, Hornbeck holds that, at a minimum, the following elements must also be present in a viable outcomes-based accountability *system*:

- **Rich assessment strategies and sophisticated data collection systems** capable of measuring whether or not the desired outcomes are being achieved.

- **Consequences attached to a system's success or failure in achieving outcomes**, i.e., incentives for meeting goals, intensive assistance for institutions that are not making progress, and meaningful sanctions when that assistance does not result in improved outcomes. This structure of rewards, assistance and penalties must be designed with the utmost care to ensure that children and families are helped, not hurt by it.

- **Autonomy and flexibility** for those administrators and frontline workers who will be held accountable for whether or not outcomes are achieved.

- **Professional development, training, and technical assistance** to enable those held accountable for outcomes to formulate appropriately rich and diverse strategies for ensuring success for all.

Hornbeck also cites other enabling conditions that must exist if significantly high results are to be reached by all. These conditions will vary according to the outcomes that are to be achieved. However, when the objective is achieving a set of cross-cutting outcomes, enabling conditions will probably include:

- **fiscal strategies** that provide adequate funding and support new ways of delivering services; and

- **innovative forms of governance** that enhance allocation of resources, coordination of services, and assessment of overall system performance.

Future Issue Briefs will examine the role of the state education agency in a state-level joint enterprise dedicated to ensuring all of the above elements are in place and functioning as a results-driven system.

Conclusion

In the decade ahead, the greatest challenge facing educators and others concerned with the well-being of children will be ensuring that the reform efforts of each of the different sectors and disciplines include coherent, long-term strategies for achieving common goals. States like Kentucky and Kansas are realizing that outcome-driven efforts to restructure public education necessarily entail the cooperation and participation of a variety of other players. In states such as Oregon and Texas--which have identified outcomes that can be used by a

range of child- and family-serving institutions--administrators and policy-makers are also finding that adopting high expectations is only the first step in an arduous process of finding points of leverage--in funding streams, staff development, connections among key leaders, data collection and information management, and governance structures--to ensure those expectations become reality.

Given the complexity of putting these elements together and aligning actions to achieve specific objectives within the education system, it is not altogether surprising that we do not yet have fully developed examples of results-oriented, cross-sector accountability systems. Despite the compelling logic of defining desired outcomes to drive changes in child- and family-serving systems, as Lisbeth Schorr (1992) points out, such an effort is a formidable task and must be overseen by "those who care about both the process and the results--not left to those who find it easy only because they don't understand the issues."

Endnotes

[1]The following sections draw heavily on the deliberations of a working group assembled as part of the Joining Forces "Setting the Agenda" project, which was directed by Janet Levy and co-sponsored by the American Public Welfare Association and the Council of Chief State School Officers.

[2]The next two sections draw heavily on the work of Janet Levy, and in particular on her unpublished draft manuscript, *"Healthy, Wealthy, and Wise": Developing Outcomes-Oriented Approaches to Improve Child Well-Being.*

[3]This section briefly discusses the interrelated nature of the outcome definition process and choosing indicators. An in-depth discussion of how state education agencies can contribute to establishing appropriately rich assessment strategies and sophisticated data collection systems that capture progress toward positively stated outcomes is beyond the scope of this article. This subject will be examined in greater depth in a later Issue Brief.

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APPENDIX I

STATEMENT OF OUTCOMES/INDICATORS

Child Well-Being Indicators

1. Healthy start index: percent of births receiving a "clean bill of health" on five key social and biological characteristics

2. Good health

   a. Adequate health care index: percent of children who are covered by health insurance, who have a regular source of primary care, and who have seen a doctor or dentist in the past year for a check-up or other routine care

   b. Incidence of measles: the number of new cases of measles in the last year

   c. Percent of children whose height-for-age falls within expected standard at ages 3, 5

   d. Percent of children with an uncorrected vision and hearing problem at age 9

3. Child safety and survival

   a. Infant mortality rate

   b. Number of confirmed child abuse or neglect cases (children ages 1 through 5)

   c. Teen homicide rate: Number of adolescents age 15 through 19 who die by homicide per 100,000 adolescents age 15 through 19

4. Adolescent healthy behavior

   a. Incidence of sexually transmitted diseases and AIDS/HIV infection among adolescents age 15 through 19

   b. Percent of adolescents age 14 through 17 who report using alcohol, tobacco products, or illicit drugs in the last thirty days

5. Adult support for children

   a. Percent of children living in single parent families

b. Number of children under age 18 who are not living with either parent and who are not living with relatives

c. Stability of child care

1. Turnover in child care workforce for children under age 5

2. Changes in child care arrangements experienced by children in the first three years of life

e. Number of children age 9 who are at home alone 2 or more hours a day

f. Percent of adolescents who are participating in adult-supervised school- or community-based extracurricular activities

6. Early nurturing

a. Daily reading to preschoolers: percent of children age 3 through 5 who are read to every day by a parent or other household member

b. Preschool access among disadvantaged children: percent of 3- and 4-year-olds in low-income families who are enrolled in Head Start, prekindergarten or a group care program that would meet the National Association for the Education of Young Children (NAEYC) accreditation guidelines

7. Emotional health and social connections

a. Number and percent of youth age 14 through 17 who participate in community service activities

b. Percent of youth age 18 through 24 who voted in the last election

c. Sense of well-being expressed by high school seniors

d. Arrest rate among youth age 13 through 17

e. Percent of children behind grade level, one or more years at age 9 and two or more years at age 14

f. Number of suspensions and expulsions (secondary school level)

8. Achievement and readiness to participate in the workforce

a. Percent of youngsters in grades 4, 8 and 12 (approximately ages 9, 13, and 17) who are achieving at or above the NAEP "proficient" level in reading, math and science

b. Percent of students who have completed Algebra I by the end of 9th grade

c. High school completion

1. Percent of 9th graders who graduate four years later

2. Percent of 24-year-olds who hold a high school diploma or alternative credential

d. "Idleness index": Number of youths age 16 to 24 who are neither in school nor in the labor force

e. Number of children with limited English proficiency

9. Economic capacity and security

a. Percent of children whose mothers have at least a high school credential

b. Percent of children living in families that are in or near poverty: percent of children under age 18 living in families whose income is below 125% of the official poverty level

c. Housing cost burden: percent of families with children under age 18 who are spending 30 percent or more of their income on housing costs

d. Income distribution: ratio of mean income earned by families with children in lowest income quintile to mean income earned by families with children in the top two income quintiles

10. Families in the future

a. Repeat births to teens

b. New family index: percent of first births that are to women who have completed high school, who are married at the time of the birth and who are not teenagers

INDICATOR: **HEALTHY START INDEX: The percent of births receiving a "clean bill of health" on five key social and biological characteristics**

SIGNIFICANCE: A child's prospects for healthy development are substantially greater when he or she begins life in good physical health and with parents who are prepared for the responsibilities of parenting.

DATA REQUIREMENTS: The five elements used to construct the Healthy Start Index are: (1) there are no abnormal conditions at birth that would put the child at developmental risk (e.g., birth injury, hyaline membrane disease, meconium aspiration, assisted ventilation of 30 minutes or more); (2) child's five minute Apgar score is in the normal range of 8 to 10 out of 10; (3) child's weight is 2500 grams or more at birth; (4) child's mother obtained prenatal care in the first trimester of pregnancy; and (5) child's mother had completed high school at the time of the birth. Births that receive a "clean bill of health" on all five of these criteria have a healthy start on life.

Need to know the number of births receiving a "clean bill of health" and the total number of births in a year. The indicator is constructed by dividing the number of healthy births by the total number of births and multiplying by 100.

CURRENT SOURCE: The five characteristics are recorded on the standard certificate of birth in most states.

For comparison among states, data in comparable format are readily available from the National Center for Health Statistics, Division of Vital Statistics.

FACTS: In 1989, 77 percent of all births in the U.S. were to mothers who had completed high school or more; 97 percent had 5-minute Apgar scores of 8 or more; 93 percent had birth weights of 5 pounds, 8 ounces or more (2500 grams); and 75 percent were to women who received prenatal care in the first trimester. In the same year, approximately 6 out of every 1,000 live births had hyaline membrane disease, 4 out of every 1,000 had meconium aspiration syndrome, and 9 out of every 1,000 needed assisted ventilation for 30 miutes or more.

COMMENTS: The Surgeon General has recommended that by the year 2000, no more than 5 percent of live births should be of low birth weight and at least 90 percent of all pregnant women should receive prenatal care in the first trimester.

INDICATOR:

ADEQUATE HEALTH CARE INDEX: Percent of children who are covered by health insurance (including Medicaid), who have a regular (non-emergency room) source of primary care, and who have seen a doctor or a dentist in the past year for a check-up or other routine care

SIGNIFICANCE:

Public health professionals are nearly unanimous in recommending that families with young children have the continuity that a regular source of care can provide. This is especially important to ensure that youngsters get the preventive care they need. Given the high costs of medical care, health insurance is necessary to ensure that needed care can be paid for.

DATA REQUIREMENTS:

Need to know the number of children who are covered by some form of medical insurance (including Medicaid), the number of children who have a regular source of medical care other than an emergency room, and the number of children who have received routine care in the past twelve months. Also need to know the total population of children in the state.

Children who meet all three of these criteria have adequate health care. The indicator is constructed by dividing the number of children who meet all three criteria by the number of children in the state and multiplying the result by 100.

CURRENT SOURCE:

For the U.S. as a whole, required data for all three items are only available from the National Health Interview Survey (NHIS) conducted in 1988. The National Medical Expenditure Survey (NMES) in 1987 obtained information on health insurance coverage. The March Demographic Supplement to the Current Population Survey (CPS) also collects information on health insurance coverage. The National Household Education Survey (NHES) in 1993 will obtain information on whether children have a regular source of medical care and whether they have seen a doctor or dentist in the past 12 months. Equivalent data for the states are not now available; to obtain these data would require state-level surveys or larger samples for NHIS, NMES, CPS, or NHES.

FACTS:

In 1987, approximately 14 percent of children under age 6 and 12 percent of children age 6 to 18 were uninsured for at least part of the year. Nearly 10 percent of children under age 6 and 11.6 percent of children age 6 to 18 were uninsured for the entire year. In 1988, nearly 10 percent of children under age 18 had no usual place for routine medical care such as a clinic, Health Maintenance Organization, or doctor's office. Sixteen percent of all children had not had routine medical care in the past two years. Children age 5 and older were the least likely to have received medical attention. Nineteen percent of children had no person who regularly provided their care when they were sick.

COMMENTS:

Simply seeing a doctor once or twice a year will not guarantee that the child is receiving the kind of preventive care and follow-up that public health experts would like to see. Surveys have shown that most young children see a doctor at least occasionally, yet a substantial minority have not received the immunizations they should have received by age 3. However, if children have a <u>regular</u> source of care and if they see the <u>same person</u> each time they visit that source, the chances that they will receive the necessary preventive care are greatly improved.

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INDICATOR:	**INCIDENCE OF MEASLES: The number of new cases of measles in the last year**
SIGNIFICANCE:	Early preventive health care is key to healthy child development, yet many children do not receive the care they need. There is particular concern that many children do not receive recommended immunizations until they are ready to enter school, even though most immunizations should be given by age 3. Because there is no routine universal point of contact with young children between birth and school entry, it is somewhat difficult to measure the number of children fully immunized by age 3. Incidence of measles provides a reasonable proxy for two reasons: (1) the illness usually will come to the attention of physicians, who must report it; and (2) since a fully effective measles vaccine was introduced in 1963, no child who has received recommended immunizations would contract the disease.
DATA REQUIREMENTS:	The number of new cases of measles occurring in children under age 18.
CURRENT SOURCE:	Medical practitioners are required to report measles cases to their state health officials. In addition, all states have agreed to report the occurrence of measles and certain other infectious diseases to the Centers for Disease Control in Atlanta.
FACTS:	In 1990, there were more than 25,000 reported cases of measles nationwide. Children under age 5, African-American and Hispanic children, and children living in urban areas are at the greatest risk.
COMMENTS:	The Surgeon General recommends that, by the year 2000, there should be no indigenous cases of measles in children.

INDICATOR:	**PERCENT OF CHILDREN WHOSE HEIGHT-FOR-AGE FALLS WITHIN EXPECTED STANDARD[1] AT AGES 3 AND 5**
SIGNIFICANCE:	This indicator is a good measure of healthy physical development. Height-for-age that is below the expected standard most often results from poor nutrition and insufficient health care. Children who manifest growth retardation for these reasons also are likely to be more susceptible to infectious disease and to experience learning difficulties.
DATA REQUIREMENTS:	Need to know the height and ages of children. These figures are then compared against recommended standards. The number of children whose height for their age is within recommended standards is divided by the number of all children that age and the result is multiplied by 100.
CURRENT SOURCE:	The National Health Interview Survey provides national data on children's height and ages.
FACTS:	In 1988, approximately 15 percent of low-income children age 5 and younger experienced growth retardation.
COMMENTS:	It is recommended that, in calculating the percent, the denominator be <u>all</u> children at the target age rather than just the number of children screened in order to create an incentive for assuring that all children receive the recommended preventive health screenings. One of the Surgeon General's goals for the Year 2000 is to "reduce growth retardation among low-income children aged 5 and younger to less than 10 percent." One of the National Education Goals is that, by the Year 2000, "all children will begin school ready to learn." Healthy physical development in the critical early years is a major component of readiness.

[1]The height-for-age standard is the range within which 95% of healthy children in the National Center for Health Statistics reference population would fall. About 5% of the remaining children could be expected to fall outside that range due to normal and acceptable biological variation. Growth retardation in excess of that is most likely due to social or environmental factors, rather than biology.

INDICATOR:	**PERCENT OF CHILDREN WITH AN UNCORRECTED VISION OR HEARING PROBLEM AT AGE 9**
SIGNIFICANCE:	School-aged children should be receiving regular health care attention. Vision and hearing are useful areas to monitor because screening is simple and inexpensive, and most conditions requiring correction are fairly easy to treat. Because problems with hearing and vision can interfere with a child's ability to learn, it is especially important that any difficulties be identified and corrected as soon as possible.
DATA REQUIREMENTS:	Need the number of children age 9 who have an uncorrected vision or hearing problem and the number of children age 9. The indicator is constructed by dividing the number of children with an uncorrected problem by the total number of children and multiplying the result by 100.
CURRENT SOURCE:	School screening programs and results from tests conducted under the Early and Periodic Screening, Diagnosis and Treatment (EPSDT) program are possible ways to obtain this information.
FACTS:	National data could not be located.
COMMENTS:	Vision or hearing problems may be uncorrected because parents lack the resources or because parents are unaware of the problem.

INDICATOR: **INFANT MORTALITY RATE: The number of infants dying in a given year per 100,000 live births**

SIGNIFICANCE: The infant mortality rate is a readily-available and widely-used indicator of child health, the conditions faced by young children, and of the quality of life in general.

DATA REQUIREMENTS: Need number of children under age 1 dying in a given year and the number of births that occurred during the same time period. Infant mortality rate is calculated by dividing the number of infants who died by the number who were born and multiplying the result by 100,000.

CURRENT SOURCE: This information is collected by each state.

For comparison among states, data in comparable format are available from the National Center for Health Statistics, Division of Vital Statistics.

FACTS: In 1988, there were 995 infant deaths for every 100,000 live births. Although less than one percent of all children in the United States die in the first year of life, there continue to be large disparities in the chances of dying across racial, ethnic, and socioeconomic groups. African-American infants are at greater risk of dying than are white infants. In 1988, 1,762 African-American infants died for every 100,000 born compared to 851 white infants for every 100,000 born. Moreover, there is substantial geographical variation in the chances of dying.

In 1989, the United States ranked 19th internationally in the level of infant mortality.

COMMENTS: The Surgeon General has set a goal of reducing the infant mortality rate to no more than 700 per 100,000 live births by the year 2000. African-American and other minority populations are special target groups of this goal.

INDICATOR:	**NUMBER OF CONFIRMED[1] CHILD ABUSE OR NEGLECT CASES (CHILDREN AGES 1 THROUGH 5)**
SIGNIFICANCE:	For healthy development, children need a safe and nurturing environment. This measure suggests the extent to which children's security is threatened, rather than protected, by the very adults on whom they are most dependent.
DATA REQUIREMENTS:	Number of cases in a given year in which abuse or neglect of children ages 1 through 5 has been substantiated, not just suspected. If cross-state comparisons are to be made, the number should be reported as a rate, that is confirmed cases per 100,000 children ages 1-5.
CURRENT SOURCE:	Available from child welfare agencies within each state. In addition, the American Humane Association in Denver, Colorado publishes Highlights of Official Aggregate Child Neglect and Abuse Reporting, which contains these data for reporting states.
FACTS:	In 1987, between 686,000 and 835,000 children nationwide experienced substantiated incidences of abuse or neglect. More than two out of five reported cases were to children aged 5 and younger. If substantiation rates among various age groups is the same, between 295,000 and 359,000 children aged 5 and younger experienced confirmed incidences of abuse or neglect.
COMMENTS:	Nationwide, only about 40 percent of reported cases are confirmed. The proportion of cases that are confirmed varies substantially from state to state. Tracking confirmed rather than reported cases has two advantages: (1) it is a better measure of what is actually happening to children, and (2) it is less likely to be affected by public information campaigns which tend to increase the number of reports. The number of cases that have been confirmed is not the same as number of children who have been abused or neglected in a given year. Some children are abused or neglected more than once in a given year. Although the number of confirmed cases of abuse and neglect is a good internal indicator of the vulnerability of children in a given state, caution should be used in making comparisons across states. States differ not only in the size and composition of their child population, but also in their ability to process and substantiate reports of child abuse and neglect. One of the Year 2000 stated goals of the U.S. Surgeon General is to reduce the rising incidence of maltreatment of children under 18.

[1]State terminology varies. Among the most commonly used terms for a confirmed case of child abuse or neglect are "substantiated," "founded," or "indicated."

INDICATOR:	**TEEN HOMICIDE RATE: Number of adolescents age 15 through 19 who die by homicide per 100,000 adolescents age 15 through 19.**
SIGNIFICANCE:	A widely cited indicator of delinquent behavior and teen violence. Most teenage murder victims are killed by other teenagers.
DATA REQUIREMENTS:	Need number of deaths by homicide among youth age 15 through 19 and population in that age group. Indicator is constructed by dividing the number of youth who have been murdered by the population age 15 through 19 and multiplying the result by 100,000.
CURRENT SOURCE:	This information is collected by each state. For comparison among states, data in comparable format are available from the National Center for Health Statistics, Division of Vital Statistics.
FACTS:	In 1988, 2,135 youth age 15 through 19 were murdered. There were large differences by race and gender. Males are much more likely to be murdered than females and African-American youth more than other youth. In 1988, African-American males age 15 through 19 were nearly ten times more likely to be victims of homicide than their white counterparts: 77 per 100,000 age 15 through 19 were murdered compared to 8 per 100,000 among white males age 15 through 19. African-American females were more likely to be murdered than whites of either sex: 12 per 100,000 African-American females age 15 through 19 were murdered in 1988 compared to 3 per 100,000 white females.
COMMENTS:	The teen homicide rate in the United States is much higher than in any other industrialized nation.

INDICATOR:	**INCIDENCE OF SEXUALLY TRANSMITTED DISEASES AND AIDS/HIV INFECTION AMONG ADOLESCENTS AGE 15 THROUGH 19**
SIGNIFICANCE:	Behavior is the most important factor in determining the health status of adolescents. This measure reflects the extent to which adolescents are behaving in ways which lead to poor health outcomes and potentially far more serious consequences.
DATA REQUIREMENTS:	Need to know the number of new cases of sexually transmitted diseases (e.g., gonorrhea, syphilis, chlamydia, genital herpes, etcetera) and AIDS/HIV infection among adolescents within each state in the past year.
CURRENT SOURCE:	Physicians are required to report cases of communicable diseases to a state agency. The Centers for Disease Control (CDC) in Atlanta collect state valid information broken down by age for gonorrhea and syphilis. Not all states, however, report all types of sexually transmitted diseases to CDC. For example, although all states report AIDS, syphillis, and gonorrhea cases to CDC, as of April 1990 only 32 states reported HIV infections and 33 states reported chlamydial infections.
FACTS:	CDC estimates that there are approximately 3 million cases of sexually transmitted diseases among teens annually.
COMMENTS:	The number of adolescents diagnosed with AIDS/HIV infection is small, but public health officials are concerned about the possibility of considerable increases in the future.

INDICATOR: **PERCENT OF ADOLESCENTS AGE 14 THROUGH 17 WHO REPORT USING ALCOHOL, TOBACCO PRODUCTS OR ILLICIT DRUGS IN THE LAST THIRTY DAYS**

SIGNIFICANCE: Behavior is the most important factor in determining the health status of adolescents. This measure reflects the extent to which adolescents are behaving in ways which lead to poor health outcomes and potentially far more serious consequences.

Alcohol consumption is a primary factor in traffic-related deaths among adolescents. Traffic accidents are the leading cause of death among adolescents.

Although virtually all teenagers experiment with a variety of substances, use in the last 30 days is indicative of more regular users. In addition, of course, alcohol and cigarettes, although legal for adults, are not legal for minors. Use of drugs such as cocaine and marijuana is against the law regardless of age.

DATA REQUIREMENTS: Need to know the number of youth age 14 through 17 who have used alcohol, cigarettes, or illicit drugs in the last 30 days. Indicator is constructed by dividing the number of youth who have used any of these substances in the last thirty days by the number of youth in the population and multiplying the result by 100.

CURRENT SOURCE: National data on drug and alcohol use among youth age 12 through 17 living in households is available from the National Household Survey on Drug Abuse sponsored by the National Institute on Drug Abuse. National and state level data will be available from the Youth Risk Behavior Surveillance System (YRBSS) being initiated by the Division of Adolescent and School Health at the Centers for Disease Control. However, the system will only gather information from youth who are in grades 9 through 12. Youth who drop out of school will be missed. Moreover, the system will only operate periodically between 1990 and the year 2000 as a way of assessing progress towards the health behavior Objectives for the Year 2000. Annual state estimates about drinking among youth will not be available through this survey.

FACTS: In 1988, 27.8 percent of youth age 12 through 17 living in households reported drinking alcohol or using some illegal drug in the past month. Approximately 12 percent of youth age 12 through 17 reported smoking cigarettes in the past month, but many of these youth also drank alcohol or used illegal drugs as well. Probably about one-third of youth age 12 through 17 used some type of substance, whether it was alcohol, cigarettes, marijuana, cocaine, or other illegal drug in the last month.

COMMENTS: Use of illicit drugs is underreported. However, it is not uncommon for persons who use illicit drugs to admit to using tobacco products or alcohol. Having the indicator refer to the use of any of the three substances compensates for the tendency to underreport the "harder" drugs and makes the indicator more stable.

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INDICATOR: **PERCENT OF CHILDREN LIVING IN SINGLE PARENT FAMILIES**

SIGNIFICANCE: Children need extensive and intensive adult support and contact for healthy development. Single parents, who must juggle many demands, often have less time available for their children. Moreover, only a minority of such children have frequent and consistent contact with their absent parent. No matter how much time their resident parent is able to spend with them, they lack the presence on a daily basis of an important adult. Further, single parent families are much more likely to be poor or financially stressed than are two-parent families. Research also shows that children living in single parent families are at greater risk of emotional and learning problems.

DATA REQUIREMENTS: Need number of children who are living with only one parent and the total number of children under age 18. The indicator is constructed by dividing the number of children living in single parent families by the child population and multiplying the result by 100.

CURRENT SOURCE: The Current Population Survey (CPS) provides numbers at the national level. To obtain reliable state-level estimates, several years of the CPS would need to be combined.

FACTS: As of March 1989, 24 percent of children under age 18 were living with a single parent. Most of these children were living with their mothers (21.5 percent), but a small proportion (2.8 percent) were living with their fathers. There are large race and ethnic differences in the proportion of children who live with only one parent. In 1989, 19 percent of white children, 55 percent of African-American children, and 31 percent of Hispanic children lived with a single parent.

COMMENTS: Not all children living in single parent families fare poorly. Many single parents do an excellent job raising their children, especially given the difficulties that they face and the general lack of support from society at large.

INDICATOR: **NUMBER OF CHILDREN UNDER AGE 18 WHO ARE NOT LIVING WITH EITHER PARENT AND WHO ARE NOT LIVING WITH RELATIVES**

SIGNIFICANCE: Healthy families provide the optimal environment for healthy child development. This indicator provides an extreme measure of the extent to which families are not able to provide a nurturing environment and systems are failing to provide adaequate support to help families rear children.

DATA REQUIREMENTS: The creation of this indicator requires several pieces of information. First, need to know the number of children under age 18 who are living with a guardian or caretaker who is not their parent and is not related to them. Most of these children will be living in foster care arrangements, but in other cases unrelated persons may have informally volunteered to take care of the children. Also need to know the number of children who are living in what the Census Bureau refers to as group quarters. Group quarters are households maintained by ten or more unrelated individuals. Persons living in group quarters may be living in rooming or boarding houses, in military barracks, in college dormitories, or in some group houses. Finally, also need to know the number of children under age 18 who are in some type of institution such as a correctional facility, mental hospital, or juvenile detention center.

CURRENT SOURCE: The Current Population Survey (CPS) collects information about children living in households and group quarters. To obtain reliable state estimates, several years of the CPS would need to be combined. The decennial census contains information at the state and national level on children's living arrangements, including households, group quarters, and the various institutions.

FACTS: In March of 1989, 360,000 children under age 18 were not living with a parent or a relative. This figure does not include children who were living in some type of institution.

COMMENTS: Children who are adopted are considered to be living with their parent or parents.

INDICATOR: **STABILITY OF CHILD CARE: TURNOVER IN CHILDCARE WORKFORCE FOR CHILDREN UNDER 5[1]**

SIGNIFICANCE: Young children need the continuity of lasting relationships with specific caregivers for optimal development. Formerly, primary attention in that regard was on parents. But, since the majority of preschool children now are cared for at least part-time by someone other than parents, stability among alternative caregivers is of concern. Frequent turnover in childcare staff works against the stability that young children require.

DATA REQUIREMENTS: Need the number of child care providers serving children under 5 who leave their position in a 12-month period. To capture the instability of child care settings, turnover in all personnel who have direct contact with children should be included. Also need the number of child care providers serving children under 5. The indicator is constructed by dividing the number of providers who leave their positions by the number of child care providers and multiplying by 100.

CURRENT SOURCE: The 1990 Profile of Child Care Settings study, sponsored by the U.S. Department of Education, obtained national data on licensed child care centers and early education programs that served 3- to 5-year-olds, on unlicensed church-based and part-day preschool programs located in states that did not require such programs to be licensed, on public-school-based early education programs that were not licensed, and on regulated home-based child care providers.

FACTS: The Profile of Child Care Settings found that about 25 percent of all teachers or primary caregivers leave a program in a 12-month period. This figure does not include turnover in assistant teachers or aides. The study revealed that about half of all centers experienced turnover in their teaching or primary caregiver staff. Among those centers that did experience turnover, the percent was extremely high -- 50 percent of the main teachers and caregivers left in a 12-month period.

No national data are available on turnover in child care staff serving children under age 3.

COMMENTS: Instability in who cares for children can also occur because children are placed in several different settings in one day (e.g., in a preschool, then in a separate child care program) or because children are moved from one arrangement to another in the course of a year.

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[1]Stability of child care should be measured in two ways: **workforce turnover**, which measures stability at the institutional level, and **changes in child care arrangements**, which measures stability from the child's vantage point.

INDICATOR: **STABILITY OF CHILD CARE: CHANGES IN CHILD CARE ARRANGEMENTS EXPERIENCED BY CHILDREN IN THE FIRST THREE YEARS OF LIFE: percent of children age 3 and younger who have experienced two or more changes in their major source of care lasting one month or longer[1]**

SIGNIFICANCE: Young children need the continuity of lasting relationships with specific caregivers for optimal development. Formerly, primary attention in that regard was on parents. But since the majority of children now are cared for at least part-time by someone other than parents, stability among alternative caregivers is of concern. Frequent movement among different child care providers, especially for very young children, works against the stability that these children need to develop secure attachments.

DATA REQUIREMENTS: Need to know the number of children age 3 and younger who have experienced two or more changes in child care arrangements since their birth and the number who have been in care during those ages. The indicator is constructed by dividing the number of children who have experienced two or more changes by the total number of children who have been in care and multiplying the result by 100.

CURRENT SOURCE: Of the large national surveys, only the Child Supplement to the National Longitudinal Surveys of the Labor Market Experience of Youth (NLSY) obtains data on the number of different arrangements children experience in the first three years of life. The Child Supplement to the NLSY, however, is not representative of all children, but only of children born to women who were age 14 to 21 in 1968. The 1991 child care supplement to the Survey of Income and Program Participation (SIPP) asks about changes in child care arrangements in the last twelve months. The 1988 Child Health Supplement to the National Health Interview Survey (NHIS) asked how many times the main child care arrangement for children under age 6 changed in the last year.

FACTS: No national data on number of arrangements typically experienced by children age 3 and younger could be located. In 1988, however, 22 percent of children under 2 years old and 27 percent of children age 2 to 3 experienced at least one change in their main source of child care in the previous year.

COMMENTS: It is suggested that two or more changes be tracked, rather than <u>any</u> changes, because changes as a child grows from infancy to the toddler stage are quite common and because it is repeated changes that are particularly disruptive for children.

Instability in who cares for children also can occur because of turnover in the staff of a program or because children are placed in multiple settings in one day (e.g., in a preschool, then in a separate child care program). In 1988, 19 percent of children under age 2 and 28 percent of children age 2 to 3 had multiple child care arrangements on a regular basis.

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[1]Stability of child care should be measured in two ways: **changes in child care arrangements**, which measures stability from the child's vantage point, and **workforce turnover**, which measures stability at the institutional level.

INDICATOR: **NUMBER OF CHILDREN AGE 9 WHO ARE AT HOME ALONE 2 OR MORE HOURS A DAY**

SIGNIFICANCE: To grow into responsible adults, children need to have daily interaction with adults who know and value them.

Moreover, although 9-year-olds are on the brink of adolescence and are very competent in many respects, they are still lacking in maturity and judgment that would help them handle unexpected situations that might arise.

DATA REQUIREMENTS: Need the number of 9-year-olds who are left alone for two or more hours on a typical day.

CURRENT SOURCE: The Survey of Income and Program Participation (SIPP) collects information on child care arrangements, including this figure, for the nation as a whole. The SIPP sample, however, is not large enough to obtain state estimates.

FACTS: In December of 1984, 6.2 percent (approximately 194,000) of 9- year-olds were without adult supervision after school. Altogether, over 2 million children between the ages of 5 and 13 were unsupervised after school in December of 1984.

COMMENTS: Responses to questions about children left without supervision may contain some level of deliberate misreporting. Such misreporting may occur because of the perceived illegality of leaving children unattended, fear for the children's safety, or the social undesirability of "latchkey" child care.

The season of the year can affect the proportion of children who are left alone. During summer months, in particular, working parents often encounter gaps in their child care arrangements and thus may resort to leaving the child alone for part of the day.

INDICATOR: **PERCENT OF ADOLESCENTS WHO ARE PARTICIPATING IN ADULT-SUPERVISED SCHOOL- OR COMMUNITY-BASED EXTRACURRICULAR ACTIVITIES**

SIGNIFICANCE: While striving for independence, adolescents still need and are eager for the support, structure, and guidance provided by parents or other adults. With the number of demands on parents today, the additional source of adult contact provided by external activities is especially important.

DATA REQUIREMENTS: Need the number of students age 12 through 17 who engage in extracurricular activities that are supervised by adults and the total number of youngsters these ages. The indicator is formed by dividing the number of students participating in adult-supervised activities by the number of youngsters and multiplying the result by 100. If a youngster is participating in several activities, he or she should only be counted once.

CURRENT SOURCE: The National Educational Longitudinal Survey of 1988 (NELS:88) collected information on outside school activities engaged in by *eighth* graders. Activities covered included scouting, boys' or girls' clubs, 'Y' or other youth groups, hobby clubs, neighborhood clubs, and summer programs. In 1982, High School and Beyond collected some information on extracurricular activities engaged in by *high school seniors*.

FACTS: In 1988, approximately 71 percent of 8th graders participated in some form of organized activity outside school. Students were divided into four quartiles based on their socioeconomic background. Children from poorer backgrounds were less likely to participate in such activities than youth from better off backgrounds: 60 percent of students in the bottom quartile socioeconomically participated in organized activities outside school compared to 83 percent in the top quartile.

COMMENTS:

INDICATOR:	**DAILY READING TO PRESCHOOLERS: Percent of children age 3 through 5 who are read to every day by a parent or other household member.**
SIGNIFICANCE:	Reading to children is one of the best ways to prepare them to learn to read for themselves. It excites them about reading and learning in general.
DATA REQUIREMENTS:	Need number of children age 3 through 5 who are read to on a daily basis by a parent or someone else in their household. Also need the total number of youngsters age 3 through 5. Indicator is constructed by dividing the number of children who are read to daily by the total number of children and multiplying the result by 100.
CURRENT SOURCE:	The 1991 National Household Education Survey (NHES) sponsored by the U.S. Department of Education contains national data on frequency of reading to preschool children. The early childhood component of this survey will be conducted annually beginning in 1993.
FACTS:	Data from the 1991 NHES indicate that 45 percent of 3- and 4-year-olds and 37 percent of 5- and 6-year-olds are read to every day by their parents.
COMMENTS:	An objective of the first National Education Goal -- that "all children in America will start school ready to learn" -- is "Every parent in America will be a child's first teacher and devote time each day helping his or her preschool children learn."

INDICATOR:	**PRESCHOOL ACCESS AMONG DISADVANTAGED CHILDREN: Percent of 3- and 4-year-olds in low-income[1] families who are enrolled in Head Start, prekindergarten, or a group care program that would meet the National Association for the Education of Young Children (NAEYC) accreditation guidelines**
SIGNIFICANCE:	Research has linked high-quality preschool experiences to positive short- and long-term effects, especially for children from disadvantaged families. Youngsters who attended these programs subsequently have been less likely to be placed in special education or to be retained in grade and are more likely to graduate than are non-participating youngsters.
DATA REQUIREMENTS:	Need to know the number of 3- and 4-year-olds who are living in low-income families and the number of these children who are enrolled in specified programs. The indicator is constructed by dividing the number of children enrolled in programs by the number of children living in low-income families and multiplying the result by 100.
CURRENT SOURCE:	National data on preschool enrollment status can be obtained from the October supplement to the Current Population Survey (CPS). The supplement, however, does not provide information on the quality of any programs attended. The CPS also provides information on the financial status of children's families. To obtain reliable state estimates, several years of the CPS would need to be combined. A Program Information Report Questionnaire is sent out annually to all Head Start programs. With minor alterations, it could provide information about the quality of those programs.
FACTS:	In 1986, 27 percent of 3- and 4-year olds in low-income families (those earning less than $10,000) were enrolled in preschool programs, compared to 42 percent of children in more affluent families.
COMMENTS:	Goal 1 of the National Education Goals is that "By the year 2000, all children in American will start school ready to learn." A primary objective related to this goal is that all disadvantaged children will have access to high quality, developmentally appropriate programs.

[1]Currently, data on this indicator defines "low-income" as having an income below $10,000. For consistency within the full data set to be used by a state's policymakers, it may be useful to define "low-income" in the same way it is defined for the indicator **percent of children living in families that are in or near poverty**, that is, with an income below 125 percent of the official poverty level.

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INDICATOR: **NUMBER AND PERCENT OF YOUTH AGE 14 THROUGH 17 WHO PARTICIPATE IN COMMUNITY SERVICE ACTIVITIES**

SIGNIFICANCE: Helping others helps adolescents develop problem-solving skills, purposeful values and constructive character traits such as caring for and respecting the rights of others. Further, it increases their awareness of societal needs and helps them recognize that they have the ability to improve the lives of those around them. Organized community service also provides an opportunity for more interaction with the adult world.

DATA REQUIREMENTS: Need to know the number of youth age 14 through 17 who participate in community service activities and the number of total number of youth age 14 through 17. The number who participate in community service activities is important by itself. However, if comparisons are to be made across population subgroups or between counties, the indicator should be reported as a percent. The percent is calculated by dividing the number who participate in community service activities by the total number of youth age 14 through 17 and multiplying by 100.

CURRENT SOURCE: A supplement to the May 1989 Current Population Survey asked about volunteer work among persons 14 and older in the previous week and in the previous 12 months. Unfortunately, the supplement is not repeated annually, so it is not possible to combine years to obtain reliable state estimates.

Independent Sector commissioned the Gallup Organization to conduct a national survey of volunteering and giving among American teenagers age 14 through 17 as a supplement to its national survey on giving and volunteering among American adults. Respondents were asked a series of questions about their volunteering and giving behavior, programs at their schools, their reasons for volunteering and their levels of confidence in various institutions. The results are published in Volunteering and Giving Among American Teenagers 14 to 17 years of Age, available from Independent Sector, 1828 L Street N.W., Washington, D.C. 20036.

FACTS: Fifty-eight percent of American teenagers age 14 through 17 volunteered in 1989. These youth averaged 3.9 hours of volunteer time each week, and over one-fourth of volunteers gave 5 hours or more per week. Total time volunteered by teenagers that year was 1.6 billion hours of service.

COMMENTS: An objective of Goal 3 of the National Education Goals is that, by the year 2000, "All students will be involved in activities that promote and demonstrate good citizenship, community service, and personal responsibility."

INDICATOR:	**PERCENT OF YOUTH AGE 18 TO 24 WHO VOTED IN THE LAST ELECTION**
SIGNIFICANCE:	Voting is a positive indicator of good citizenship and a sense of connectedness to one's community.
DATA REQUIREMENTS:	Need the number of persons age 18 to 24 who actually voted in the last election and the number of persons age 18 to 24 residing in the state. The indicator is constructed by dividing the number who voted by the number who are age 18 to 24 and multiplying the result by 100.
CURRENT SOURCE:	Every two years the November supplement to the Current Population Survey (CPS) gathers data on voter registration and actual voting. Several years would need to be combined to obtain stable state estimates.
FACTS:	In 1988, 36 percent of persons age 18 to 24 actually voted. African-American and white young adults were almost equally likely to vote (35 percent and 37 percent, respectively), but Hispanic youth were much less likely to vote (17 percent).
COMMENTS:	Increasing voter registration is easily accomplished in a pro forma way; increasing actual voting is more difficult. Voter participation is generally higher during presidential elections.

INDICATOR: **SENSE OF WELL-BEING EXPRESSED BY HIGH SCHOOL SENIORS**

SIGNIFICANCE: Seniors' hopefulness, optimism about the future, and sense of personal efficacy are key reflections of how effectively they are likely to take on the impending responsibilities of adulthood.

When considering a subject like well-being, it is useful to combine both subjective and objective indicators.

DATA REQUIREMENTS: Need to have a representative sample of high school seniors who are asked a general question about how their lives are going. Indicator is constructed by reporting the percent of seniors who report being very happy or that their lives are going very well.

CURRENT SOURCE: For the nation, this indicator is available each year from a survey called Monitoring the Future, conducted by the Institute for Social Research at the University of Michigan (see Appendix D for further details).

FACTS: In 1988, a sample of high school seniors were asked the following question: "Taking all things together, how would you say things are these days -- would you say you're very happy, pretty happy, or not too happy these days?" Twenty-one percent of the seniors said that they were very happy, 67 percent said that they were pretty happy, and 12 percent said that they were not too happy. There were substantial differences in reported happiness by race. Twenty-three percent of African-American seniors reported being not too happy and only 11 percent reported being very happy. Among white seniors, on the other hand, 23 percent reported being very happy and only 10 percent reported being not too happy.

COMMENTS:

INDICATOR: **ARREST RATE AMONG YOUTH AGE 13 THROUGH 17**

SIGNIFICANCE: Healthy adolescents have a growing awareness of the value and importance of community, and are beginning to evidence signs of good citizenship. This indicator suggests the extent to which positive social connections are not being formed.

DATA REQUIREMENTS: Number of arrests of youth age 13 through 17 in a given year and the total number of youth age 13 through 17 residing in the state. The indicator is formed by dividing the number of arrests by the number of adolescents and multiplying the result by 1,000.

CURRENT SOURCE: This information is collected by each state.

The U.S. Department of Justice publishes state-level data on persons arrested and crimes committed. Information can be obtained by contacting the Justice Statistics Clearinghouse, National Criminal Justice Reference Service, Box 6000, Rockville, MD 20850.

FACTS: In 1987, there were 109 arrests for every 1,000 adolescents age 13 through 17.

COMMENTS: The arrest rate depends on police and court policies, not just on teen behavior. Thus changes in policies can affect arrest rates over time.

Individuals can be arrested more than once and thus be counted more than once. The ages covered by reported juvenile arrest rates may vary by state. Often, they begin as young as age ten and extend through the maximum age subject to juvenile court authorities.

Because this indicator is proposed as a measure of social connections rather than crime, it is less important to know whether or not the juvenile actually committed the offense. If he or she is guilty, the problem is clear. If he or she is not guilty, the experience of an unjustified arrest may cause alienation.

INDICATOR:

PERCENT OF 9-YEAR-OLDS WHO ARE ONE OR MORE YEARS BEHIND GRADE FOR THEIR AGE

PERCENT OF 14-YEAR-OLDS WHO ARE TWO OR MORE YEARS BEHIND GRADE FOR THEIR AGE

SIGNIFICANCE:

This indicator is a direct measure of learning problems at key ages and an indirect predictor of other types of problems. While what used to be called "social promotions" -- allowing a child to move to the next grade even though he or she has not mastered the work of the current grade -- are undesirable, grade repetition also is a problem in itself. It affects self-esteem and may disrupt peer relationships that are important. Healthy child development entails achieving desired performance "on schedule," that is, at expected age levels (see also High School Completion indicators).

DATA REQUIREMENTS:

Need number of 9-year-olds who are at least one year behind the expected grade level for their age and the number of 14-year-olds who are at least two years behind their expected grade level for their age. Also need the number of 9-year-olds and the number of 14-year-olds who are enrolled in school. The indicator for the 9-year-olds is constructed by dividing the number of 9-year-olds who are behind grade for age by the number of 9-year-olds who are enrolled and multiplying the result by 100. The indicator for the 14-year-olds is constructed in a parallel fashion.

CURRENT SOURCE:

The October Supplement to the Current Population Survey (CPS) asks about grades children are attending. The CPS also obtains information on children's ages. The National Educational Longitudinal Study of 1988 (NELS:88) interviewed 8th graders nationwide, the majority of whom were age 14 or older. The youth were asked about grade retention as well as many other topics.

FACTS:

Data from the October 1989 CPS indicate that approximately 25 percent of all 9-year-olds and 30 percent of all 14-year-olds were one or more years below modal grade for their age. Approximately 7 percent of the 14-year-olds were two or more years behind modal grade for their age. (Modal grade, however, is only a rough indicator of grade retention. School districts vary substantially in the rules governing age of school entry and entry of children born between September and December.) Data from NELS:88 reveal that nearly 18 percent of all 8th graders have repeated at least one grade. Just over 2 percent have repeated 2 or more grades.

COMMENTS:

Grade repetition can be affected by changes in promotion policies.

In recent years, there has been a tendency among middle class parents to hold back their children, particularly sons, prior to first grade.

It may be difficult to determine how to handle children in "transitional" grades or in multi-age classes.

INDICATOR:	**NUMBER OF SUSPENSIONS AND EXPULSIONS (SECONDARY SCHOOL LEVEL)**
SIGNIFICANCE:	This indicator is a proxy for behavior problems among adolescents. The indicator also reflects loss of learning time and, potentially, further alienation of students from school.
DATA REQUIREMENTS:	Need to know the number of suspensions or expulsions among students attending secondary schools.
CURRENT SOURCE:	The National Center for Education Statistics has national information on school suspensions and expulsions and on students enrolled. It also is possible to determine the number and proportion of youth age 17 and younger who have been suspended or expelled in the last year from the 1988 Child Health Supplement of the National Health Interview Survey. This survey also contains the behavior problems index described in the "Comments" section.
FACTS:	During the 1983-1984 school year, there were approximately 10 suspensions for disciplinary reasons per 100 students attending public secondary schools. There were an additional 9.9 in-school alternatives to suspensions per 100 students attending public secondary schools.
COMMENTS:	The same students may be suspended several times. Thus number of suspensions and expulsions is not the same as number of students who have been suspended or expelled. Might want to consider including other types of disciplinary actions that schools take against disruptive students. Several national surveys have collected a behavior problems index (BPI) that has been shown to predict subsequent suspensions and expulsions. Parents are asked to rate the behavior of their children on 28 items. Parents have been asked about the behavior of children as young as five. The index has several subscales including an antisocial scale, a depressed-withdrawn scale, and an attention deficit-hyperactive scale. It would be possible to use the whole BPI or the antisocial subscale to target students who are prone to problem behaviors. Such students could then receive appropriate help from teachers, psychologists, or other professionals before their behavior results in being suspended or expelled.

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INDICATOR: **PERCENT OF YOUNGSTERS IN GRADES 4, 8 AND 12 (APPROXIMATELY AGES 9, 13, AND 17)[1] WHO ARE ACHIEVING AT OR ABOVE THE NAEP[2] "PROFICIENT"[3] LEVEL IN READING, MATH, AND SCIENCE**

SIGNIFICANCE: Academic achievement at a challenging level is both a contributor to and predictor of success in future educational pursuits and in the workforce. Moreover, academic achievement is strongly related to a youngster's self-esteem and sense of personal efficacy. The Children's Defense Fund reports that, "Youths who by age 18 have the weakest reading and mathematics skills, when compared to those with above-average skills, are eight times more likely to bear children out of wedlock, nine times more likely to drop out of school before graduation, five times more likely to be out of work, and four times more likely to be on public assistance."

DATA REQUIREMENTS: Need number of youngsters in grades 4, 8 and 12 who are achieving at the NAEP "proficient" or "advanced" level and total number of students at each grade level. The indicator is constructed by dividing the number of students who are "proficient" or "advanced" by the total number of students for each age level and multiplying each result by 100.

CURRENT SOURCE: Data valid at the state level are or will be available from NAEP as follows:

Math[4]	grade 8	1990-
	grade 4, 8	1992-
	grade 4, 8, 12	1994-
Reading	grade 4	1992-
	grade 4, 8, 12	1994-
Science	grade 4, 8, 12	1994-

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[1]State-by-state NAEP results are reported by grade level; national trends are reported by age.

[2]The National Assessment of Educational Progress (NAEP) is a Congressionally-mandated measurement of the scholastic achievement of elementary, middle, and high school students. It entails a continuing assessment of a nationally representative sample of 4th, 8th and 12th graders. Since 1969-70, assessments have been conducted periodically in reading, mathematics, science, writing, history/geography, and other fields. NAEP also collects information about an extensive array of background variables, and assessment results are reported by gender, community type, and parents' level of education.

[3]In the future, NAEP will use three achievement levels for each age group: basic, proficient, and advanced. These levels incorporate national standards of adequate achievement based on absolute, substantive criteria. The "proficient" level represents a level that is considered ambitious, but nonetheless achievable by the majority of youngsters.

[4]There has been some controversy about the way levels were defined in 1990. New levels are being developed for the 1992 assessments.

FACTS: In 1990, only 17 percent of 8th grade students achieved the "proficient" level in math. One percent achieved the "advanced" level.

COMMENTS: Goal 3 of the National Education Goals is: "By the year 2000, American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter including English, mathematics, science, history and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy."

INDICATOR: **PERCENT OF STUDENTS WHO HAVE COMPLETED ALGEBRA I BY THE END OF 9TH GRADE**

SIGNIFICANCE: Algebra I is considered a "gatekeeper" course. A student must pass Algebra I in order to take higher level math courses, such as advanced Algebra or Trigonometry, that represent the more advanced levels of achievement which are being sought. In order for there to be sufficient time in a student's high school career to complete advanced courses, Algebra I should be successfully completed in 8th or 9th grade.

DATA REQUIREMENTS: Need number of 9th graders who have completed Algebra I in either 8th or 9th grade,[1] and total number of 9th graders (measurement to be taken at end of 9th grade year). Indicator is constructed by dividing the number of students who have completed Algebra I by the total number of 9th grade students and multiplying by 100.

CURRENT SOURCE: Data on course enrollments are available from state education agencies in forty states. Only a portion of these states, possibly half, could report the enrollments by grade. A few states have a student record system that would allow tracking of course completion and credits earned.

National sample data on course completion was collected in the National Transcript Studies (1987, 1991) and results are available from the National Center for Education Statistics.

FACTS: As of the 1989-90 school year, a total of 81 percent of high school students took Algebra I by the time they graduated from high school (based on state data compiled by the Council of Chief State School Officers). A sub-sample of seven states reported data by grade level. The percent of students that had take Algebra I by the end of grade 9 were: AL--51%; CA--55%; CT--55%; FL--37%; HA--22%; ND--70%; and WI--39%.

COMMENTS: Some states are recommending a sequence of Integrated Mathematics courses in high school as opposed to the traditional sequence of Algebra I, Geometry, Algebra II, Trignometry, Calculus. The integrated courses introduce elements of Algebra, Geometry, and Trignometry within the same year-long course, with the goal of having students learn to apply elements of each subject to mathematical problems. The Integrated Mathematics I course could be equated with Algebra I for purposes of this indicator.

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[1]A few students may take Algebra I prior to 8th grade, but the number is likely to be too small to affect the overall result.

INDICATOR:	**HIGH SCHOOL COMPLETION: Percent of 9th graders who graduate four years later[1]**
SIGNIFICANCE:	Today, a high school education is the minimum preparation necessary for participation as a productive member of the workforce. This indicator adds to the basic concept of high school completion the issue of whether or not completion is accomplished "on-time," that is, within the period that would be expected of a healthy, fully successful youngster. Many youngsters have an extended high school career to allow them to complete work; while this is preferable to dropping out or graduating without adequate knowledge and skills, the ideal would be success throughout school that then allows on-time graduation.
DATA REQUIREMENTS:	Need to know the number of high school graduates in a given year and the number of 9th graders who were enrolled four years earlier. The indicator is constructed by dividing the number of graduates by the number of 9th graders who were enrolled four years earlier and multiplying the result by 100. A prorated portion of persons in secondary school, but for whom grade level is unknown, should be included in the denominator. The rate should also be corrected for movement of students into and out of the state.
CURRENT SOURCE:	State education agencies.
FACTS:	In 1989, approximately 70 percent of 9th graders had graduated four years later. Hispanics are least likely to graduate on-time and whites are the most likely to graduate on time.
COMMENTS:	Goal 2 of the National Education Goals is: "By the year 2000, the high school graduation rate will increase to at least 90 percent."

[1]High school completion should be measured in two ways: those who complete "on-time" (9th graders who graduate four years later) and those who complete at least within a few years of "on-time" (24-year-olds who hold a high school diploma or alternative credential).

INDICATOR:	**HIGH SCHOOL COMPLETION: Percent of 24-year-olds who hold a high school diploma or alternative credential[1]**
SIGNIFICANCE:	Today, a high school education is the minimum preparation necessary for participation as a productive member of the workforce. For a variety of reasons, not all young people are able to graduate by age 18. However, if they do not obtain a high school diploma by age 24, they are much less likely to ever obtain one.
DATA REQUIREMENTS:	Number of 24-year-olds who have a high school diploma or equivalent degree and number of 24-year-olds residing in the state. Indicator is constructed by dividing the number of persons who have a high school credential or the equivalent by the number of persons 24- years-old and multiplying the result by 100.
CURRENT SOURCE:	The October supplement to the Current Population Survey (CPS) provides data on high school completion by age. Beginning in 1988, the CPS has asked whether high school was completed by means of an equivalency test, such as the GED. To obtain reliable state-level data, it will be necessary to combine several years.
FACTS:	In 1990, 86 percent of 24-year-olds had a high school diploma or alternative credential, such as the GED.
COMMENTS:	Goal 2 of the National Education Goals is: "By the year 2000, the high school graduation rate will increase to at least 90 percent." Graduating from regular high school is preferred to obtaining an equivalency degree. Some researchers have found that youth who obtain the General Educational Development (GED) certificate or other equivalency degrees do not perform as well as regular high school graduates on tests of ability or in the workplace.

[1]High school completion should be measured in two ways: those who complete "on-time" (9th graders who graduate four years later) and those who complete at least within a few years of "on time" (24 year olds who hold a high school diploma or alternative certification).

INDICATOR:	**"IDLENESS INDEX": Number of youths age 16 to 24 who are neither in school nor in the labor force**
SIGNIFICANCE:	Engaging in productive, societally-respected activity is a key part of emotional and economic well-being for adolescents and young adults.
DATA REQUIREMENTS:	Need to know the enrollment status of persons age 16-24 and whether they are currently employed. If contrasts are to be made among subgroups, the indicator should be expressed as a percent.
CURRENT SOURCE:	National data can be obtained from the October Supplement of the Current Population Survey. Several years would need to be combined to obtain reliable state data.
FACTS:	In October 1990, approximately 5.4 million youth age 16 to 24 (or about 17 percent) were not enrolled in school and were not employed. The percent who are neither in school nor employed varies substantially by race/ethnicity and by gender. For example, 13 percent of males age 16-24 were not enrolled in school and not employed compared to 21 percent of their female counterparts. Eleven percent of white males, 24 percent of African-American males, and 14 percent of Hispanic males age 16 to 24 were not enrolled in school and were not employed. Nineteen percent of white females, 33 percent of African-American females, and 34 percent of Hispanic females age 16 to 24 were not enrolled in school and not employed.
COMMENTS:	The higher percentage among females may reflect women who have children and choose not to work.

INDICATOR:	**NUMBER OF CHILDREN WITH LIMITED ENGLISH PROFICIENCY (LEP)[1]**
SIGNIFICANCE:	Proficiency in English is important to successful participation in the United States' workforce, so youngsters who have a language background other than English need to develop English proficiency. Related both to eventual economic well-being and, in the shorter term, to school success, it also is important that, while students continue to expand their knowledge of other subjects at the same time, they develop sufficient proficiency in English to succeed in English-only classes. With a growing proportion of school-age children having a language background other than English, policymakers must be particularly sensitive to the needs of these children because they have not always been well served in the past.
DATA REQUIREMENTS:	Need to know the number of children who meet the definition of having limited English proficiency.
CURRENT SOURCE:	State education agencies collect and report to the U.S. Department of Education the number of LEP students enrolled in public and private school language-assistance programs. No data are collected regularly on LEP children who are not of school age or who are in English-only classes and not receiving special language assistance. The 'Long Form' of the 1990 census asked whether a language other than English was spoken at home, what the language was, and how well each person in the household spoke English. State-valid data can be obtained from the U.S. Bureau of the Census.
FACTS:	No accurate figures on the number of LEP children are available. Depending on the source, estimates range from 2.1 million to 3 million.
COMMENTS:	

[1]According to the Council of Chief State School Officers, a fully English proficient student is able to use English to ask questions, to understand teachers and reading materials, to test ideas, and to challenge what is being asked in the classroom. A limited English proficient student has a language background other than English, and his or her proficiency in English is such that the probability of the student's academic success in an English-only classroom is below that of an academically successful peer with an English-language background.

INDICATOR: **PERCENT OF CHILDREN WHOSE MOTHERS HAVE AT LEAST A HIGH SCHOOL CREDENTIAL**

SIGNIFICANCE: Research has shown a significant correlation between maternal education and various indicators of child well-being. In families where the mother has less than a high school education, there is a high likelihood of poverty, that children will experience school difficulties, and that those children will leave school early.

DATA REQUIREMENTS: Need to know the educational attainment of children's mothers and the total number of children. The indicator is constructed by dividing the number of children whose mothers have obtained a high school degree or equivalent credential by the number of children and multiplying the result by 100.

CURRENT SOURCE: The Current Population Survey can be used to obtain this information for the majority of states. Several years would need to be combined to produce reliable state estimates.

FACTS: In March 1989, 80 percent of children were living with a parent who was at least a high school graduate. There were substantial variations by the living arrangements of the child and by race and ethnicity. Nearly 84 percent of children living with both parents had a parent who was at least a high school graduate compared to 58 percent of children living with never married mothers. Approximately 82 percent of white children lived with a parent who was at least a high school graduate compared to 72 percent of African-American children and 48 percent of Hispanic children.

COMMENTS: Some mothers with less than a high school education are able to provide an intellectually stimulating environment for their children.

Women who have immigrated from less-developed countries are less likely to have completed high school, but tend to be very different from women born in this country who have dropped out of high school.

INDICATOR:

PERCENT OF CHILDREN LIVING IN FAMILIES THAT ARE IN OR NEAR POVERTY: percent of children under age 18 living in families whose income is below 125 percent of the official poverty level

SIGNIFICANCE:

Poverty is both a cause and a predictor of many conditions which jeopardize a child's healthy development. These conditions not only put the family and child at risk, but also cost federal, state, and local governments billions of dollars annually.

Many children live in families that slip into and out of poverty, and others live in families that barely remain above the official poverty threshhold. The conditions faced by these children are likely to be closer to those of children living below the formally-established poverty line than those of more affluent children.

DATA REQUIREMENTS:

Need number of children living in families that are below 125 percent of the official poverty level and the number of children under age 18. Indicator is constructed by dividing the number of children living in or near poverty by the number of children and multiplying the result by 100.

CURRENT SOURCE:

National data are available from the Current Population Survey. Several years would need to be combined to obtain reliable state estimates.

FACTS:

In 1989, 19 percent of children under age 18 were living in poverty. There were sharp differences in the likelihood of living in poverty by race and ethnicity. Over 43 percent of African-American children and nearly 36 percent of Hispanic youth were living in poverty compared to 14 percent of white children.

When children living near poverty (below 125 percent of the official poverty level) are included, 24 percent of all children are in financially tenuous circumstances. Again racial and ethnic differences are marked: approximately 19 percent of white children age 17 and younger are living in families that are below 125 percent of the poverty level, 49 percent of African-American children, and 46 percent of Hispanic children are living in such families.

Whether the children are living with both parents or with only their mothers also is an important factor in the likelihood that they will be living in or near poverty: only 14 percent of children living with both parents are in or near poverty compared to 60 percent living with only their mother. Children living with never married mothers are the most likely to be living in or near poverty: 72 percent of such children are in families that are below 125 percent of the poverty level.

COMMENTS:

INDICATOR: **HOUSING COST BURDEN: percent of families with children under age 18 who are spending 30 percent or more of their income on housing costs**

SIGNIFICANCE: Economic security results from a family having sufficient income to purchase the basic necessitites of life such as food, shelter, clothing, and health care, as well as to maintain a standard of living that most people would consider reasonably comfortable. This indicator measures the purchasing power of income, focusing on the category which increasingly is most likely to consume excessive amounts.

DATA REQUIREMENTS: Need the dollar amount spent by families with children on mortgage payments (excluding amount spent for insurance and taxes) or the amount spent on rent (excluding utilities), and their family income. The percentage of family income spent on housing is obtained by dividing the amount spent on mortgage or rent by the family's income and multiplying by 100. To construct the indicator, divide the number of families that spend thirty percent or more of their income on housing by the total number of families and multiply the result by 100.

CURRENT SOURCE: The decennial census provides the necessary data to calculate this indicator for individual states.

The American Housing Survey, sponsored by the U.S. Department of Housing and Urban Development and conducted by the U.S. Bureau of the Census, collects these data for the nation as a whole every other year. In addition, it collects data on major metropolitan areas every four years.

FACTS: According to the 1990 decennial census, approximately 28% of households pay thirty percent or more of their income on housing costs alone. The percent paid differs substantially by whether the home is owned or rented. Over 41% of renters paid thirty percent or more of their income on housing costs compared to not quite 20% of owners. The poor are the most likely to pay a large portion of their income on housing costs: approximately 56% of the poor pay more than half of their income on housing costs.

COMMENTS: Data are usually presented for households rather than families with children.

Difficulties arise because mortgages and rents are for the household as a whole. If several families share living quarters, determining the proportion of a family's income spent on housing is more problematic because it is not known what proportion of housing costs are borne by each family.

INDICATOR: **INCOME DISTRIBUTION: ratio of mean income earned by families with children in lowest income quintile[1] to mean income earned by families with children in the top two income quintiles**

SIGNIFICANCE: Well-being must be measured against both objective and subjective standards -- the latter being an individual's perception of his or her well-being. This indicator measures family income relative to other parts of the society and can serve as a proxy for perceived well-being. Presumably, large income disparities would result in lower satisfaction levels and possibly disaffection from society.

DATA REQUIREMENTS: Need to have a complete income distribution for families with children so that the quintiles can be determined and mean income within each quintile calculated. Indicator is formed by dividing the mean income of families with children in the lowest income quintile by the average of the mean income of families with children in the top two income quintiles. The average of the mean income in the top two income quintiles is calculated by adding the two mean incomes and dividing by two.

CURRENT SOURCE: The March Supplement to the Current Population Survey (CPS) collects detailed information on income. Several years would need to be combined to obtain reliable state-level estimates. The decennial census also provides the necessary information for constructing this indicator.

FACTS: In 1989, the mean income for families with children who were in the lowest income quintile was $7,714 compared to $81,966 for families with children earning in the top quintile and $47,217 for families with children earning in the second highest quintile. The mean income of families in the bottom quintile is only 12% of the mean income earned by families in the top two quintiles. In other words, on average families in the top two quintiles earned more than eight times as much as families in the bottom quintile.

COMMENTS: As data are currently reported, mean family income takes no account of family size. Thus, families earning the same amount are assumed to be equally well off, even though one may consist of two people and one may consist of eight people.

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[1]Income quintiles are fifths of an income distribution. If the incomes of all families are ordered from lowest to highest, the point at which one-fifth of the families earn that much income and four-fifths earn more income represents the dividing line for the first quintile or lowest quintile of the income distribution. Similarly, the point at which four-fifths of the families earn less than that inocme and one-fifth earn more than that income represents the dividing line for the top quintile.

INDICATOR: **REPEAT BIRTHS TO TEENS: number of second or higher order births to teenagers**

SIGNIFICANCE: Teenage childbearing is linked to lower social and economic attainment, marital instability, and welfare dependency. Having a second birth while still a teen increases the probability of school drop-out, welfare receipt, and poor birth outcomes for the children.

This indicator is also a reasonable measure of system effectiveness in responding to problems. These girls clearly are "visible" to health care and other service providers by virtue of the fact that they have already had one birth. Intensive responses should be able to reduce subsequent pregnancies.

DATA REQUIREMENTS: Number of second or higher order births in a given year to women who are under age 20.

CURRENT SOURCE: This information is recorded on the standard certificate of birth in most states.

For comparison among states, data in comparable format are available from the National Center for Health Statistics, Division of Vital Statistics.

FACTS: In 1988, 112,382 teenagers had a repeat birth -- that is, they had a second, third, fourth, or even fifth and higher order births while still teenagers. An additional 2,252 did not state the birth order of the child born. Some of these were probably also repeat births.

COMMENTS: Although teenage motherhood is a risk factor for many poor outcomes including school drop-out and welfare dependency, not all teen mothers succumb to these fates. However, the chances of escaping them are greatly reduced when the young woman has two or more children while still a teen.

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INDICATOR:

NEW FAMILY INDEX: percent of first births that are to women who have completed high school, who are married at the time of the birth, and who are not teenagers.

SIGNIFICANCE:

Families begun by teens, by women with less than a high school education, or by unmarried mothers face a very high likelihood of poverty and other obstacles. This index describes the number of new families that are starting with no obvious strikes against them.

As policymakers are tackling a host of current problems, this index provides insight into what can be expected for children in the future.

DATA REQUIREMENTS:

Need to know the number of first births in which all three of the maternal characteristics are on the favorable side -- that is, the mother has completed high school, she is not a teen, and she is married. The indicator is formed by dividing the number of first births with such favorable beginnings by all first births and multiplying the result by 100.

CURRENT SOURCE:

This information is recorded on the standard certificate of birth in most states.

For comparison among states, data in comparable format are available from the National Center for Health Statistics, Division of Vital Statistics, although special runs would be required because the published Vital Statistics volumes do not report the combination of these maternal characteristics for first births. Not all states report all the necessary pieces of information. California, for example, does not report mother's marital status and Washington does not report mother's education level on the birth certificate.

FACTS:

In 1988, 58 percent of all first births were to women who were 20 or older, who were married, and who had at least a high school degree at the time of the birth; 42 percent of all first births were to women who failed to meet at least one of these three criteria.

COMMENTS:

Just as single parent families or families of teen mothers may function well, families that appear to have no obvious problems may, in fact, be experiencing some difficulties such as conflict between the spouses. Overall, however, families that do not begin facing obstacles will be in a better position to do well in the long-run.